

## **DECLARATION A**

I declare that this thesis is my original work and has not been presented in any other university/institution for consideration. This thesis has been complemented by referenced sources duly acknowledge.

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## **DECLARATION B**

I confirm that the work reported in this thesis was carried out by the candidate under my supervision and submitted to the Faculty of Economics and Management Science for examination. With my approval as the supervisor.

**Supervisor:**

**Mr. Mohamed Said (Caarshe)**

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**Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

## **APPROVAL LETTER**

This thesis is submitted in partial fulfillment of the requirement for the Award for Bachelor Degree of Banking and Finance in Faculty of Economics and Management Science in Red Sea University.

**Red Sea University**

**Academic Year 2022-2023**

**For the Graduate Committee**

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.....

**Dean of Faculty of Economics and Management Science**

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

## DEDICATION

I would like to dedicate this project to my beloved parents my mom the queen of my life **Halima Said Ali** words are sufficient to describe my mother's value in my life, and the encourage of moral and mental support and she is also source of my work through all my life, Also I would like to dedicate my Father **Muhammed Abdalla Isse**, my old Sister **Hamdi Nour Muhammed** & my old Brother **Abdirisak Muhammed Abdalla** the best at all who have paid their afford and time to make me attain this amazing stage also dedicate to everyone interesting to read my thesis, I am also dedicate anyone who participated in completion of this work.

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## **ABSTRACT**

Evaluating the implementation of E-payment systems is not a recent field of study. The research design for this study was descriptive research design, also tools of analysis for this study was SPSS application for analysing method. There is significant strong positive relationship between innovation and banking industry in selected Dahabshil Bank, Bosaso – Puntland, Somalia. Thus, the researcher implies and the  $r = 0.677$  and it shows that there is strong relationship between innovation and banking industry because the  $r$  is greater than 0.5. There is significant weak positive relationship between trust and banking industry in selected Dahabshil Bank, Bosaso – Puntland, Somalia. Thus, the researcher implies and the  $r = 0.491$  and it shows that there is a weak relationship between trust and banking industry because the  $r$  is less than 0.5. There is significant moderate positive relationship between security and banking industry in selected Dahabshil Bank, Bosaso – Puntland, Somalia. Thus, the researcher implies and the  $r = 0.532$  and it shows that there is moderate relationship between security and banking industry because the  $r$  is equal than 0.5. This study investigated the impact of electronic payment system on banking industry by observing Dahabshil International Bank, the target population of this study was employees at Dahabshil International Bank in Bosaso – Somalia. The researcher concluded according to finding of the 40 respondents that there is a positive impact of electronic payment system on banking industry, and it's the correlation between independent and dependent variable.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.0 Introduction**

This study investigates the Impact of Electronic Payment System on Banking Industry. This chapter provides an overview of the study and it begins with background of the study, problem statement, and purpose of the study as well as the specific objectives of the study. The chapter also covers the research questions, scope of the study and Significant of the study as well as the definitions of key terms.

### **1.1 Background of the study**

The twenty first century has witnessed tremendous technology advancement in all spheres of human endeavor. The increasing advancement in information and communication technology has transformed the landscape of any buses in the present world while this change is not unique to banking, banking industry now operates in a complex and competitive environment characterized by these changing conditions and highly unpredictable economic climate. Information and communication Technology (ICT) is at the focal point of this global change curve. In Somalia, Modern banks currently understand that only those that update their payment service delivery and operations are probably going to endure and thrive in the 21st century- This is because of weight of globalization and quickly evolving innovation (Saleh, 2004). Business today is directed during a time of profoundly complex technology forcing on banking authorities the need to execute advanced banking system which accord with present day needs- Therefore paper-based transactions are currently being supplanted by electronic based transactions (Agboola,

2006). In recent years in Somalia, there has been persistent public outcry as regards the new challenges, the electronic banking since its inception in 1996 has brought to financial institutions (banks) and general public. To many people, banking transaction via the internet is insecure and often congested- Hence, interruption is usually experienced in banking operations due to network failures. This hindered customers from carrying out transactions at that point in time. Besides, many people do not know what e-banking entails, or how to use its products. This aids in revealing the secret PIN number (in the Case of ATM card and other cards transaction) to the third party by the illiterate cardholders (customers) at any time they want to make withdrawals as they always request for assistance. Consequently, there are Increases in fraudulent activities in the banking industry. The CBN Annual Report and Statement of Accounts, (2009) have it that, the number of reported cases of attempted or successful fraud and/or forgery in the banking industry rose in 2009. According to the report, seventy percent of the fraud cases were perpetrated via the electronic system. Banking industry is primarily a shifter of awareness as opposed to consideration or choice. Advertising makes consumers aware of more options, search more and find better alternatives. This increases the market share of smaller banks and makes the industry more competitive. Banking industry comprises a very important portion of the “retail” economy with significant attention from regulators and policymakers. Despite the importance of the banking sector, structural demand analyses to date (e.g., Dick, 2008; Molnar, Violi, and Zhou, 2013; Wang, 2010) have been based on aggregated market share data on deposits. There has been very little research using detailed consumer level data to characterize consumers’ heterogeneous response to drivers of demand (Honka et al., 2017). Banking industry has become the global economic

powerhouse, as it operates with companies belonging to other business sectors, public organizations, and other ambits of society. At the same time, financial institutions have to face their environmental responsibility and pressures from stakeholders, given that they lend to companies that contaminate and produce products that are harmful to the environment (Simpson & Kohers, 2002; Krasodomska, 2015). In addition, financial institutions consume environmental resources, such as paper and energy, and generate waste, so their policies on their environmental impact are an important aspect of their actions involving corporate social responsibility (CSR) (Gallego-álvarez, n.d.). Banking industry is oldest and has a significant contribution in socio-economic development of people (Goyal et al., 2019). Government of India did nationalize 14 large commercial banks in 1969 and 6 banks were nationalized in 1980 (Goyal et al., 2019). The involvement of private and foreign players is increased in this sector after liberalization and globalization which is also known as new economic policy 1991 (Goyal et al., 2019). Banking industry is divided in three categories i.e., public sector, private sector and foreign sector banks (Bhattacharyya and Pal, 2013). Indian banking industry has become the fifth largest industry at global level and it is expected that Indian banking sector will be 3<sup>rd</sup> largest industry in the world by 2025 (Goyal et al., 2019). Banking industry is facing several problems due to competition in banking sector, technological change, increasing non-performing assets, rising customer's expectation, increasing demand of profitability and others (Ranajee, 2018; Goyal et al., 2019; Singh et al., 2019). Therefore, it is necessary to measure the performance of banking sector in order to make Indian banking industry globally competitive and to increase its contribution in Indian economy. As measurement of performance of banking sector in an attractive area for researchers due to several reasons



such as rinsing non-performance assets of public sector banks, rising competition, increasing work burden on employee, huge competition in financial market and others (Bhattacharyya and Pal, 2011; Madan and Bajwa (2016)). In India, prior researchers have focused to estimate the efficiency and performance of government owned, private and foreign sector banks in different aspects (Bhattacharyya and Pal, 2013) (Haralayya & Aithal, 2021). Banking industry is particularly high. Non-bank businesses such as telecommunications providers are not allowed to provide mobile money offerings to customers without doing so in partnership with a registered bank. This severely cuts the marginal profit that could be made by nonbanking industry players, it maintains the status quo (high bank concentration) in South Africa's banking industry, and ultimately prevents innovation that may lead to financial inclusion and lower transactional costs (Johannes, 2018). Banking industry between 2003 and 2013, using the efficiency-adjusted Lerner index and stability inefficiency as indicators of competition and insolvency risk. They show that greater competition increases liquidity risk but decreases credit risk and insolvency risk. Tan and Floros (2018b) also find similar evidence (Peterson, 2020). Banking industry. In the last two decades, a lot of banking innovation has taken place in order to improve commercial banks financial performance. Branchless banking which involves the use of agency banking and electronic banking channels in the distribution of banking products and services is one such innovation. This study purpose was to evaluate the effect of branchless banking on the financial performance of commercial banks in Somalia. The specific objectives of the study were to analyze the individual effects of agency banking and electronic banking channels on the financial performance of commercial banks in Somalia and the combined effect of both agency and electronic banking on the financial

performance of commercial banks in Somalia. The study adopted an exploratory research design. A survey of all the 42 licensed commercial banks in Somalia was done. Both primary and secondary data on branchless banking and financial performance of banks was obtained from the individual commercial banks, Central Bank of Somalia banking annual supervision reports respectively. Return on Assets (ROA) was used as the main indicator of commercial banks financial performance (Dzombo et al., 2017). The development in the Islamic banking industry to cater to the soaring demands of customers has laid the foundation of ICC in order to compete with conventional banks and to avoid dealing with interest (Nazimah, 2011). The development in Islamic banking system with the passage of time has increased the demand for interest free products (Salman and Nawaz, 2018). According to Dali and Hamid (2007), the purpose of Islamic credit card provision is to replicate Islamic banking services similar to conventional banking strictly complying with Shariah instruments. However, ICC is utterly different in its usage, policies and procedures compared to conventional credit card. Ayub (2007), found that according to Jeddah-based Organization of Islamic Conference (OIC)“A credit card is a legal document issued by the bank to a legitimate person allowing the holder of the card to purchase goods or services from a credit card accepting service provider without immediate payment of the price.” Similarly, Yee et al. (2007), defined the literal meaning of a credit card is to buy first and pay later. Literally, credit card refers to buy now and pay later (Amin, 2012). The bank pays for the purchase of goods or services on behalf of a customer, who, afterward charges the customer at a regular interval based on the contract between the bank and the customer. Ferdian et al. (2008), found that an ICC is a method of payment which must comply with three principles of Shariah. The credit card essentially complies Shariah

requirements on lending contracts, mode of transactions and has avoided factors of Riba (interest on payment), Gharar (uncertainty) and Maysir (gambling). banking industry across the world and its provision in volume is apparently trivial. Libya is one of the few countries that opted for full-fledged Islamic banking services in 2013, effective from January 1, 2015. This transition has come in a revolutionary manner responding to the people's call for full Islamization of the banking services. By the date specified, all interest-bearing activities were set illegal and banks began launching Shariah (Islamic law) compliant products. In the years followed, the newly implemented Islamic banking system suffered great deal of confusion at all levels. From the central bank angle, the regulatory framework, guidelines and expertise were not fully in place to guide, supervise and assist the turbulent banking institutions during the transformation process. This is in addition to the lack of financial stability and qualified human resources that were required to conduct full system transformation. As a result, the public's expectations were not met and consequently the solid support for full Islamic banking system has weakened. One of the main issues concerning the public's dissatisfaction regarding. (Ali Q, Yaacob H, 2019). A strong banking industry is a significant in every country and can have a significant affect in supporting economic growth over efficient financial services (Salehi and Azary, 2008, Salehi et al., 2008). There is no doubt that the revolutionary developments in information and communications technology was changed the banking industry. Internet banking, despite the uncertainties about its future, will be an important part of this transformation (Wu, 2005). Internet Banking not only permitted customers to perform a variety of banking activities, such as managing their bank accounts and transactions without leaving their home or office (Weir et al., 2006), it is also a very cost-efficient way for the banks to offer

customer services (Yakhlef, 2001). Also, it has been noticed that the Internet banking adoption has not reached at the level that the banks are fulfilled with, (Calisir & Gumussoy, 2008). Common concerns were recognized such as performance and security of banking transactions, as well as confidentiality of the personal account data. These concerns rise the level of perceived risk, that makes worse of the levels of trust in the banks, which generally has been declined especially after the 2008 financial crisis (Calisir & Gumussoy, 2008). The developed countries as a part and parcel of their economy are nowadays using electronic banking or online banking. There have previously been a number of studies associated to Internet banking covering a variety of research dimensions. For example, (Pyun et al., 2002) in the U.S., Japan and Europe, (Gurau 2002) in Romania; (Sathye, 1999) in Australia; (Polatoglu & Ekin, 2001) in Turkey; (Balachandran, 2000) in Malaysia; and (Jasimuddin, 2004) in Saudi Arabia focused also related studies of internet banking. Aside from the developed countries, the developing countries was undergoing strong development in internet banking such as India and the Republic of Korea are experiencing especially strong growth in internet banking. In Southeast Asia, internet banking is also increasing rapidly in Thailand, Malaysia, and Singapore and in Philippines (Mia et al., 2007). We refer also (Thulani et al. 2009) in Zimbabwe; (Guangying, 2009) in China; (Dhekra, 2009) in Tunisia; (Adesina and Ayo 2010); (Maiyaki and Mokhtar 2010) in Somalia; (Salehi and Alipour 2010) in Iran and (Jun Wu 2005) in South Africa, discovered the extent of adoption and usage of internet banking. In Nepal, ATMs are the most common electronic distribution channel for banking services but only a few customers are using internet banking facilities (Alex, 2012). In Africa, some east countries which part of developing countries were undertaking some studies relating the adoption of internet

banking in their banks and citizens. For instance, in Kenya due to the developing state of the economy's internet is not readily available to most individuals willing to perform financial transactions. But in the recent past Kenya has experienced a range on financial services through the adoption of online banking; these services include sending and receiving money, paying bills, account notification, balance enquiry, purchase of mobile airtime all at the convenience of the customer (Gikonyo, 2014). With the development of asynchronous technologies and secured electronic transaction technologies, however, more banks in Developing Countries like Tanzania have come forward to use Internet banking both as a transactional as well as an informational medium. Due to the advancement of Information & Communication Technology (ICT), the industrial and service sectors especially banking in Africa have shifted their delivery channels toward self-service channels such as online banking services (Kawamala, 2013). In Somalia, after collapse of central government of Somalia in 1991 the country entered civil war that cause disappearance of banking services till 2009 that was established some private banks in Mogadishu-Somalia to provide basic banking services. After that banks start to offer some advanced service offered by developing countries such as offering loans, investing real estates, and so on. Nowadays, banks provide electronic banking or internet banking that make great contributions to Somali people to make international trade or make buying or selling products or service through the internet. So, this study was aim to investigate factors effecting the adoption of internet banking in commercial banks in Mogadishu-Somalia. According to our best knowledge as team researchers, it seemed to be this study might not have conducted literature before. (said, 2018).

## **1.2 Problem Statement**

All banks compete with each other to attract their customers in different ways through providing convenient, accessible and acceptable services or/and products to their customers. One of the most important of these services is the electronic services that have contributed significantly to increase the distance between costumers and the bank. (Siam, 2008). E-banking was adopted by banks so as to improve their service delivery, decongest queues in the banking hall, enable customers withdraw cash 24/7, aid international payment and remittance, track personal banking transaction, request for online statement, or even transfer deposit to a third-party account. Despite the effort of banks to ensure that customers reap the benefits of e-banking, the bank is met with complaints from customers as regards, malfunctioning Automated Teller Machines (ATMs), network downtime, online theft and fraud, non-availability of financial service, payment of hidden cost of electronic banking like Short Message Services (SMS), for sending alert, mandatory acquisition of ATM cards, non-acceptability of Somalia cards for international transaction amongst others. This study fills the gap the effect of e-payment system on the efficiency of banks in Somalia by using Dahabshil Bank as a case study.

## **1.3 Purpose Of The Study**

The main purpose of this study is to investigate the Impact Of Electronic Payment System On Banking Industry in Dahabshil Bank, in Bosaso-Puntland-Somalia.

## **1.4 Objectives Of The Study**

The study is guided by both general objectives and specific objectives.

### **1.4.1 General Objectives**

The general objective of the study is to examine the relationship between electronic payment system and banking industry in Dahabshil Bank.

### **1.4.2 Specific Objectives**

1. To determine the effect of innovation on banking industry
2. To examine the effect of trust on banking industry
3. To evaluate the effect of security on banking industry

### **1.5 Research Questions**

1. What is the effect of innovation on banking industry?
2. What is the effect of trust on banking industry?
3. What is the effect of security on banking industry?

### **1.6 Scope of The Study**

This study describes the Electronic Payment System on Banking Industry in Dahabshil Bank. in bosaso-puntland-somalia.

#### **1.6.1 Geographical Scope**

This study describes the Electronic Payment System on Banking Industry in Dahabshil Bank. in bosaso-puntland-somalia.

#### **1.6.2 Content Scope**

The study intended to determine the Electronic Payment System on Banking Industry in Dahabshil Bank in bosaso – puntland - Somalia, and content of these are POS, Debit cards, Credit cards, transactions, internet banking, e- cheque, Tele banking, etc.

### 1.6.3 Time Scope

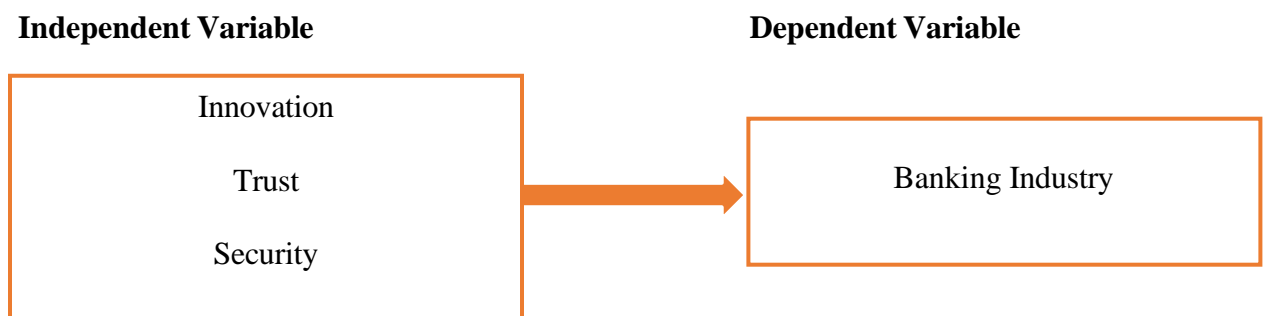
The study was conducted for the period of Months that is from November 2022 to April 2023. The study period will deem to be sufficient enough to enable in the data collection and presentation of findings to attain the information for both academics and decision making.

### 1.7 Significant of the study

The results of this study are very essential in examining the effect of Electronic Payment System on Banking Industry in Dahabshil Bank in Bosaso, also the study is useful for potential researchers as literatures, which are interested to carry out for further study in this field, and it will also bring the following benefits Increase future reference, bring new knowledge, help needs for future researchers and also help organizational business and large company.

### 1.8 Conceptual framework

Figure (1.1) Summarizes the relationship between the independent variables which is Electronic Payment System and the dependent variables which is Banking Industry.





## 1.9 Operational definition

**Electronic banking:** the definition of e-banking varies amongst researches partially because electronic banking refers to several types of services through which a bank's customers can request information and carry out most retail banking services via computer, television or mobile phone (Lutsk, 2004).

**Trust:** A trust is an arrangement wherein a person (the settlor) transfers the title of property such as money or land to a trustworthy person (the trustee) in accordance with a trust agreement or will and the trustee administers or disposes of the property (trust property) on behalf of the beneficiaries specified by the settlor in accordance with the trust objectives established by the settlor. As its name literally implies, a trust is built on a strong fiduciary relationship between the settlor and the trustee.

**Security:** is an amount of money that's paid to secure the use of property or services.

Security Bank Corporation is one of the Philippines' leading universal banks serving retail, commercial, corporate and institutional clients. Established on June 18, 1951, it was the first private and Filipino-controlled bank of the post-World War II period.

**Innovation:** Innovation is a process by which a domain, a product, or a service is renewed and brought up to date by applying new processes, introducing new techniques, or establishing successful ideas to create new value. The creation of value is a defining characteristic of innovation.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter reviews the literature related to the study of the impact of electronic payment system on banking industry in Dahabshil Bank, Bosaso. This chapter reviews the role of Electronic Payment System and how they relate to Banking Industry, it also assesses how Electronic Payment System Mix affects Banking Industry and as well as the relationship between Electronic Payment System and Banking Industry. The chapter is in line with the research objectives, research questions of the study and it covers up the related topics of the variables in the study.

#### **2.1 Electronic Payment System**

The development of electronic business means during the past decade has led to the rapid growth of electronic commerce, which has allowed many institutions to conduct business operations over the Internet. In the modern era, with an increase in the number of institutions and individuals that carry out commercial activities. The emergence of electronic commerce has generated many needs for new financial services that are not available in traditional payment systems, and thus the electronic payment systems have come to replace the traditional payment systems. The electronic payment system is a set of linked elements, tools, and means of payment associated with facilitating the exchange of services and goods throughout websites. As the electronic payment systems provide ease in handling the various commercial exchange operations between the various parties. The use of electronic payment systems has many advantages and benefits for large institutions,

either governmental or private, banks, industrial and service institutions, and individuals across the world. As it allows the payment system through effective and reliable electronic platforms to make payments efficiently, quickly, and with transparency in tracking transactions with less time and less cost and increasing confidence between the parties to the exchange commercial process. The electronic payment system includes many features and advantages that distinguish it from the traditional payment system, such as confidentiality, availability, usability, security, authentications, and trustworthiness. Not to mention time-saving, no time constraints, cost-effective, and fast exchanges of information are considered the most important advantages resulted using the electronic payment system. Also, electronic payment systems has several constructs that play a basic role in dealing with these models, such as: performance expectancy, effort expectancy, social influence, price value, awareness, security, privacy, and culture. Digital payment services provided by financial institutions consist of: virtual point of sales, which consider secure, means to receive payment by using electronic payment types such as, Visa card and Master card. A second factor is mobile phone system operators, which are considered universality, cost-effective, widely acceptable, and globally accessible. Also, digital Wat It is an electronic wallet that makes empower for electronic payments by adding the essential data of all Visa cards, Master cards, or prepaid cards in the same secured cloud platform, which customers enable to securely add, store, update and cancel a large amount of card information from different financial institutions. Technology acceptance model (TAM) factors and tools make a significant contribution to identify customer intention, and attitudes towards technology platforms use. Moreover, it set on two variables: perceived ease of use and perceived usefulness. However, essential techniques in payment methods

that utilize the cloud-systems correlate with technology acceptance model by electronic based transaction such as cyber cash and net bill as well as internet-based payment system like visa card. Electronic commerce and electronic payment systems are important sectors which affected directly by the Covid-19 pandemic. Online markets and electronic payment systems have been recognized as one of the fastest-growing technology in the last decade even within normal situations. However, several factors may influence such growth, which many consider as barriers or enablers of using the electronic payment system. electronic payment systems that the pandemic of Covid-19 has a positive influence on electronic payment systems with trust and usage perspectives. Whereas, Covid-19 has a negative influence on online shopping and electronic payment systems. Which has been suggested to improve the process of electronic payment based on trust and competence factors. (Odeh & Yousef, 2021).

## **2.2 Banking Industry**

Banks are intensive users of both IT and financial technologies, and have a wealth of data available that may be helpful for the general understanding of the effects of technological change. Banking industry is also important because of the key roles of banks in providing financing, deposit, and payments services to other sectors of the economy. banking industry also demonstrates some of the general problems in measuring the effects of technological progress and how these problems might be addressed. For example, to the extent that markets are competitive, the benefits from technological advances in an industry may be competed away and passed through to customers or factors of production and not measured as productivity increases in that industry. As shown below, banks may have essentially

“given away” the benefits from the ATM technology in the 1980s as the industry became more competitive due to deregulation and rents from market power shifted to consumers.

It has been shown elsewhere how new products and quality improvements from technological progress are often neglected in government statistics and may lead to overstatements of inflation and understatements of productivity growth. In banking, there are many new products and quality improvements that are not easily captured in standard productivity measures, and we show how some may be measured in alternative ways. Research on the banking industry provides a wealth of information about technological progress. Banks intensively use modern technologies and the detailed data on this industry allow for investigations of the effects of advances in both IT and financial technologies and in both “front-office” and “back-office” technologies. Banking industry data give opportunities to investigate examples in which individual technological changes can be observed and some of their effects can be measured. The detailed data also allows researchers to link technological progress to productivity and other indicators of performance using multiproduct cost and profit functions and other methods. These methods help account for improvements in service quality and variety and address other difficulties inherent in the use of labor productivity indexes. The banking data also allow for analysis of the effects of technological progress on banking industry structure – or the extent to which technological progress facilitates consolidation – using statistics on bank scale, distances, and mergers and acquisitions (M&As). The microeconomic research on banking technologies also yields a number of findings. IT advances appear to have increased productivity and scale economies in processing electronic payments that have reduced costs dramatically – in some cases by more than 50% during the 1990s – and may

help explain some of the recent shift of customers from paper to electronic payments. The use of the small business credit scoring technology also appears to have yielded benefits by increasing lending to “marginal applicants” that might not otherwise receive bank credit. (Berger et al., 2003).

## **2.3 Empirical Review**

### **2.3.1 Effect of Innovation on Banking Industry**

Paying attention to innovation and supplying products/services in accordance with the changing needs of customers are the most important goals of any firm in an era which is characterized by short product life cycles, dynamic markets and complex processes (Olsten, 2005). Innovation is creating new knowledge and ideas to facilitate business results and improve firms’ processes and produce new products/services (Plessis, 2007). Innovation is a way to overcome complex and changing situations, especially if firms use open innovation or customer-oriented innovation (Chesbrough, 2003, 2006). In fact, customers have an outside view on firms and have more realistic ideas, which are often more creative and more effective than inside ideas (Magnusson, 2003). In addition, attention on customers’ ideas and needs creates faster ideas and launch much better innovative products/services. Innovation speed and innovation quality were used for measuring innovation capability. Innovation speed includes five items: firms’ speed in generating original and novel ideas, new service launching, new service development, new technology and equipment deployment and new problem solving (Liao *et al.*, 2010). This study adopts the work of Lahiri (2010) on innovation quality. Innovation quality includes five items, which show the newness and creativity of new and novel ideas, services, processes, technology and equipment and problems. (Dauerlarvae et al., 2014). Innovations

in information processing, telecommunications, and related technologies – known collectively as “information technology” or “IT” – are often credited with helping fuel strong growth in the U.S. economy, although questions remain about the relative importance of IT versus other factors. The extensive research on the banking industry may help in the general understanding about the effects of technological change. Changes in lending technologies and innovations in risk management technologies may allow banks to monitor and control risk exposures at long distances at less cost. As examples, banks’ abilities to observe deteriorations in the quality of loans issued in other nations and to model country risks may have improved over time, allowing them to issue credits at greater distances with less additional cost and risk. Money market mutual funds were helped by IT innovations that let them store, keep track of, and move large amounts of information on securities and customer accounts much more cheaply over time. Public equity and debt markets were similarly favored by IT innovations for handling data, and were also propelled by reductions in trading costs. Much of the trading is now done electronically and the costs per trade have fallen dramatically. Asset-backed securities markets were aided by these IT innovations and by financial innovations that allow for more accurate pricing, more securitization instruments, and better risk management models. (Berger et al., 2003). Innovation is important for the survival of every business sector, and financial services are no different. Indeed, research confirms that innovation affects a firm’s performance positively (Damanpour *et al.*, 2009). The extent to which the financial sector can make contributions to the economy depends, to a large extent, on the quality and quantity of the products and services it offers customers. Business entities wishing to restore customer confidence need to focus on innovative products that meet them

customers' needs (Kumar, 2011). The benefits offered by banking innovations are two-fold: Banks relish cost reduction and market expansion while customers enjoy a wide range of services/products and convenient banking. Innovations provide an impetus for banks to improve their market performance by recovering from palpable inefficiencies prevalent in the banking industry, as is the case in Ghana and other emerging countries (Frimpong, 2010). Liberalised domestic regulations, intensified competition, rapid innovations in new financial instruments, and the massive growth in information technology have fueled the growing desire for innovation in the banking industry (Frei *et al.*, 1998). While the vital importance of innovation in today's competitive climate has been widely proclaimed, innovation is not without its challenges. Many such challenges relate to how customers adopt related innovations. According to Woldie *et al.* (2008), it is one thing to innovate, but entirely another for the innovation to be accepted by consumers. Although innovation continues to enjoy massive interest on the part of business researchers, in Ghana the key factors influencing customers' adoption of such innovations in the banking industry have not been empirically examined. In the wake of expectations of increased competition, growing customer demands and new regulations in Ghana being likely add complexity to banks' business models (Ghana Banking Survey, 2010; 2011), developing and planning effective innovative strategies are critical for their growth and survival. The aim of this article is to examine the critical factors which determine whether or not banking innovations are adopted. The study has a number of theoretical and managerial implications: First, drawing from innovations diffusion theory (Rogers 1995), the study offers a model for understanding the key factors that influence consumer adoption of innovative e-banking products. Since no prior study exists in Ghana on the subject matter,



this article will contribute significantly to the body of knowledge on innovation adoption in the Ghanaian banking industry. From a managerial point of view, this article provides a guide to industry players and policy makers on how to strategically facilitate the operations of the industry by implementing policies that will enhance customer adoption of innovative products. Indeed, industry experts will now be better informed when designing innovative products. This will ensure that they take into consideration the findings of the study to produce tailor-made products that fit the peculiar characteristics of Ghanaian banking clients. The most revolutionary electronic innovation in Ghana (and the world) has been the ATM (Abor, 2004). In Ghana, banks that offer ATM services have networked their machines, to increase their utility to customers. Since Trust Bank Ghana introduced ATMs in 1995, the technology has found acceptance on a massive scale from the banking industry. Today, almost all commercial banks in the country offer ATM services to their clients. The combined services of the automated and the human tellers means Ghanaian banks have become more productive during banking hours. Also, bank customers benefit immensely as a result of shorter queues in banking halls. Since ATM services offer an alternative to queuing in banks, customers are able to invest such time saved in other productive activities. As indicated by Rose (1999), ATMs have become a cost-efficient means of yielding higher productivity. The need for innovation in the financial services industry as a whole cannot be overemphasized. Merton (1992) argues that financial innovation drives the financial system towards the theoretically limiting goals of zero transaction costs and dynamically ‘complete’ product markets. (Domeher et al., 2014).

### **2.3.2 Effect of Trust on Banking Industry**

Gefen et al. (2003a, p. 308) defined trust as “the expectations that other individuals or companies with which one interacts will not take improper advantage resulting from the dependence one has on them”. The literature concerning non-electronic markets examines

the role of trust as a predictor of future commitment (Morgan and Hunt, 1994; Polo and Cambra, 2007), satisfaction (Polo and Cambra, 2007) or loyalty (Gremler and Brown, 1996). These relations are normally based on commercial history, reputation, dependability and even physical contact among actors. However, in a dynamic and changing world economy, the old ways of building trust might not be valid, given the nature of many transactions. There is therefore a need for a reliable source of knowledge that could store the commercial history of each of the parts intervening in a transaction. The problem lies in how to store information about the reputation and dependability of each part and how to make it available to the other participants in a global electronic market (Zhang, 2000). Trust has been considered a decisive factor in stimulating purchases over the internet (Quelch and Klein, 1996; Jarvenpaa et al., 1998, 2000; Gefen, 2000, 2002; Kovar et al., 2000; Zhang, 2000; Gefen et al., 2003a, b; Stewart, 2003). The reason for such importance lies in the fact that, in the absence of any practical guarantee, the consumer cannot be certain that the seller will not resort to undesirable, opportunistic behavior, such as the violation of privacy, unauthorized use of credit card information, inequitable pricing or access to unauthorized transactions (Reichheld and Schefter, 2000). The consumer will therefore be affected by a sense of insecurity and concern about the privacy and control of their personal information. (Muñoz-Leiva et al., 2010). Customers' trust on electronic banking transactions as compared with face-to-face transactions have some unique dimensions, such as the extensive use of technology for transactions, the distant and impersonal nature of the online environment, and the implicit uncertainty of using an open technological infrastructure for transactions. The spatial and temporal separation of the bank branch and the customer, and that of the customer and the financial advisor increases fears of

opportunism arising from product and identity uncertainty. Customers' trust in an Internet environment thus, is very important as there is little guarantee that the online vendor will refrain from undesirables, unethical, opportunistic behavior, such as unfair pricing, presenting inaccurate information, distributing personal data and purchase activity without prior permission (Gefen, 2000). To further complicate the situation there is a concern about the reliability of the underlying Internet and related infrastructure that banks and financial service providers employ to interface with customer. Overall, these unique differences reduce customer perceptions of control over their online transactions, increasing their apprehension about adopting e-banking, and providing unique challenges to banks and financial service providers to find ways in which to initiate and foster electronic relationships with their customers. Trust is interwoven with risk, because it reduces the risk of falling victim to opportunistic behaviour. However, trust is essentially needed only in uncertain situations since trust effectively means to assume risks and become vulnerable to trusted parties (Hosmer, 1995). As noted by Lewicki and Bunker (1995), trust is situational and context-specific, and should be investigated under specific contextual and situational parameters. In the context of Internet shopping, Lee and Turban (2001) The particular case of electronic banking that lacks the physical presence of bank branch and a physical interaction between the bank personnel and the customer, render a unique environment, in which trust is of paramount importance. Aladwani (2001) identified customers' trust as an important future challenge of online banking Retail banks can build mutually valuable relationships with customers through a trust-based collaboration process (Dayal et al., 1999). However, the way in which trust may be gained and the impact it has on online banking outcomes are not yet well understood (Jones et al., 2000). Trust in

electronic banking is a new and emerging area of interest in the field of marketing of financial services research. Extant literature on trust related to online banking is scarce and focused on more general issues of e-commerce. (Yousafzai et al., 2003).

### **2.3.3 Effect of Security on Banking Industry**

Information systems security issues are now endemic to the banking industry across the globe (Chopra et al., 2013; Dwivedi et al., 2021a, 2021b). Commonly, no bank is safe and secure from cybercriminals and cyber-attacks. Lack of leadership involvement and employee behavior toward information systems security possess a high risk and fraud (Luftman et al., 2015). Employees' influences on intended information security behavior, and security plays a vital role in the effective implementation of IS security policies and compliance in organizations. IS security awareness and engagement are necessary for employees to avoid internal threats, and there is no extensive academic research that solves the problem. In the academic literature, there is limited research that analyzes the influence of managers' leadership style on the respective employees' IS-related behavior intentions (Gühr et al., 2019) but there is no applied research to the specific context of the banking industry. Threats to IS security were categorized into four dimensions; Internal (both human and non-human) and security is also an area for practicing flowing stream strategy. The behavior of transformational leadership in relationship commitment, trust and communication, and information exchange with employees is stronger as compared to transactional leadership behavior (Birasnav et al., 2015, 2019). Information systems security cannot be achieved without the internal and external stakeholders (Dwivedi & Momaya, 2003) efforts of the organizations. External IS security threats can be monitored, detected, mitigated, and prevented using various security software, hardware, and

networking security, rules, and policy. However, internal IS security cannot be possible with only hardware, software, networking security, and policy. Flexibility is the answer that may motivate employees of IS security. It can be possible with flexible hours, flexible working places, rewards, and motivation by leaders for detecting IS security threats. Any security policy-related suggestion by employees can be rewarded and appreciated. Leadership should establish forums where the employee can contribute their inputs for IS security and the best ideas can be appreciated and rewarded periodically. Such forums will also help organizations to manage the knowledge related to IS security. Such flexibilities will enable organizations to improve IS security. Information systems security is the most important area of concern in banks as it is directly related to monetary outcomes and interruption in business processes. The role of leadership is vital and endless to encourage employees' information systems security intention in terms of compliance, awareness, and participation (Humaidi & Balakrishnan, 2015a), (Almeida et al., 2022).

## **2.4 Research Gap**

Various studies have determined the relationship of electronic payment system and banking industry but researcher have different countries they conclude impact of electronic payment system on banking industry. The studies reviewed have been used in various countries, most of the studies reviewed positive relationship variables such as the research. All these studies and our study is geographical gap.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

This chapter outlined the methodology which was used in carrying out the study. Aspects covered include research design, population & sampling design, data collection methods, data analysis methods and testing of data validity & reliability. Finally, it presented the model adopted in the study in order to be able to analyze and discuss the solution to the research question and arrive at conclusions.

#### **3.1 Study Design**

This study was conducted through the core sectional descriptive research design. This type of research design selected for this study is denominated descriptive research. This descriptive design is often will be used to investigate “what is” by combining quantitative and qualitative research methodologies. Descriptive studies employ observational and survey methods to collect descriptive data (Gheisari, 2017). This method is suitable for the study because it helps the collection of a large amount of data from a sizable population.

#### **3.2 Research Population**

(Zhao, 2013). Define target population as the entire aggregation of respondents that meet the designated set of criteria within a study. according to (Leech, 2005), a population element is the study subject and may consist of a person, an organization, customer database, or the amount of quantitative data on which the study measurement is being taken.

The total population of this study was **40** subjects and sample size is **36** persons;  
Computed by Slovenes' Formula.

N

**Slovene's formula:**  $n = \frac{1}{1 + N(e)^2} \times N$

### 3.3 Sample Size Determination

In view of the nature of the target, population was the staffs and managers of Dahabshil Bank; a sample will be taken from each category. The Slovene's formula is used to determine the minimum sample size.

N

**Slovene's formula:**  $n = \frac{1}{1 + N(e)^2} \times N$

$$(e)^2 = (0.05)^2$$

$$n = \frac{1}{1 + 40(0.05)^2} \times 40 = \frac{40}{1.1} = 36.36 \approx 36$$

$$1 + 40(0.05)^2 = 1.1$$

**Table 3.3.1 Sample Frame**

Population Category	Sample Size	Percentage
Staffs	26	72.2%
Managers	10	27.8%
<b>Total</b>	<b>36</b>	<b>100%</b>

### **3.4 Sampling Technique**

The sampling techniques is non-Random sampling techniques specially using purposive sampling or judgmental sampling, because simple random sampling is a sampling technique where every employee in the population has an equal chance of being selected in the sample. Sampling technique is one of the important factors which determines the correctness of survey results. (Samaddar et al, 2020).

### **3.5 Data Collection Instruments**

This section includes data collection instruments, validity and reliability of the data collection instruments and lastly, the data collection procedures.

#### **3.5.1 Instrument**

This study use questionnaires which will be designed by the researcher by considering the research objectives.

##### **3.5.1.1 Reliability**

(Joppe, 2000) defines reliability as: The extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable.

##### **3.5.1.2 Validity**

In this research validity of the respondent's instruments questionnaire will be establish through a content validity index CVI by given the instrument to expert in his/her field and they judge whether the instrument is valid or not. The researcher will be computed the content validity from experts' judgments by using content



$$\text{CVI} = \frac{\text{Number of Question Declared Valid}}{\text{Total Number of Questions}}$$

### **3.5.2 Data Collection Procedures**

#### **3.5.2.1 Before the Administration of the Questionnaires**

The first the researcher was to get an introduction letter were obtains from the Puntland State. Read Sea University for the researcher to solicit approval to conduct the study from respective respondents. Researcher Will be appointed a research assistant who would assist in the data collection; brief and orient them in order to be consistent in administering the questionnaires.

#### **3.5.2.2 During the Administration of the Questionnaires**

During the data collection the researcher will be ask the respondents to sign the informed content. And also, was requested to the respondents to answer kindly all questions.

#### **3.5.2.3 After the Administration of the Questionnaires**

After the receiving the questionnaires back in a time, the researcher was checking the completeness of all answers that whether the respondents answer the entire questionnaire. After checking the researcher was arranged the data and edit the data for the errors and completeness of whether the respondents have left unfulfilling questionnaires.

### **3.6 Data Analysis**

After the data is collected, the researcher Will be checked again the questionnaire to ensure their completeness and consistency. Coding and classification followed to ensure sufficient analysis. The data will be entered and analyzed by using statistical package for social scientists (SPSS) computer software to generate cumulative frequencies and percentages.

The software package was chosen because it is the most used package for analyzing survey data and it can further use the coded data to provide analyzed data in the form of tables, frequency distributions, percentages, bar graphs and pie charts in an attempt to provide a clear picture of the research findings. Descriptive statistics was used to deduce any patterns, averages and dispersions in the variables.

### **3.7 Ethical Consideration**

In this study bearing in mind the ethical issues the researcher were provide to the respondents with the necessary information as regards the main purpose of the research, expecting duration and procedures to following, and be in position to keep privacy and not disclose the confidentiality of respondents and researchers' responsibility.

### **3.8 Research Limitations**

The researcher claimed an acceptable (0.05 level of significance) 5% margin of error in view of the following anticipated threats to validity with relevance to this study.

1. **Testing:** differences in conditions and time when the data was obtained from Respondents by different persons on different days at different hours. This was minimized by orienting and briefing the assistants on the sampling techniques and data gathering procedures.
2. **Attrition/mortality:** not all questionnaires were returned as neither completely answered nor even retrieved back due to circumstances on the part of the respondents such as travel, sickness, hospitalization and refusal/withdrawal to participate. In anticipation to this, the researcher reserved more respondents by exceeding the minimum sample size. The respondents were reminded not to leave

any item in the questionnaires unanswered and were closely followed up as to the date of retrieval.

3. Some of respondents are not willing to give proper answers. So, they give socially acceptable answers to hide the real problems in their organizations.

## **CHAPTER FOUR**

### **DATA PRESENTATION, ANALYSIS AND INTERPRETATIONS**

#### **4.0 Introduction**

This study investigated the impact of electronic payment system on banking industry. In This chapter presents the presentation of data analysis and interpretation. The data analysis and interpretation were based on the research questions as well as research objectives, the presentation is divided in to two parts. The first part presents the respondents demographic information, namely, gender, age, education and experience while the second part deals with presentation, interpretation, and analysis of the research questions and objectives. Below are the data presentations and analysis of research findings.

#### **4.1 Demographic Information**

##### **4.1.1 Gender of the respondents**

**Table 4.1. 1 Gender of the respondents**

		<b>Frequency</b>	<b>Percent</b>
<b>Valid</b>	Male	21	58.3
	Female	15	41.7
	Total	36	100.0

Primary Data (Source: 2023)

The above table and the graph shows the level of gender of the respondents of the questionnaire. The respondents were 36. The number of the male respondents was 21 and their percentage was 58.3%. The number of female respondents was 15 and their

percentage was 41.7 %. This implies that the majority Dahabshil Bank workers were male and this is because that Dahabshil Bank mostly employs the men then the women.

#### 4.1.2 Age of the respondents

**Table 4.1. 2 Age of the respondents**

		<b>Frequency</b>	<b>Percent</b>
<b>Valid</b>	18 - 25 years old	16	44.4
	26 - 35 years old	14	38.9
	36 - 40 years old	4	11.1
	40 years old and above	2	5.6
	Total	36	100.0

Primary Data (Source: 2023)

The table above shows the level of age of the respondents of the study. The age of 16 of the respondents was 18 – 25 years and their percentage of the total respondents was 44.4%. The age of 14 of the respondents was 26 – 35 years, their percentage was 38.9%. The age of 4 of the respondents was 36 - 40 years and as a percentage to the total respondents was 11.1%. the age of 2 of the respondents was 40 years and above as a percentage to the total respondents was 5.6%. this implies that the majority of Dahabshil Bank worker's group age were between 18 - 25 years old this is because that Dahabshil Bank prefer to employs the youth.

### 4.1.3 Education level of the respondents

**Table 4.1.3 Education level of the respondents**

		Frequency	Percent
<b>Valid</b>	Bachelor degree	20	55.6
	Master degree	11	30.6
	PHD	5	13.9
	Total	36	100.0

Primary Data (Source: 2023)

That the researcher classified the levels of education of respondents into four parts. In the above table indicates 20 (55.6%) of respondents gained bachelor degree, while 11 (30.6%) of the Master degree, and while 5 (13.9%) of the Phd. This implies that Dahabshil Bank prefer to employs the high educated people.

### 4.1.4 Work experience of the respondents

**Table 4.1. 4 Work experience of the respondents**

		Frequency	Percent
<b>Valid</b>	1 – 3 years	16	44.4
	4 – 7 years	15	41.7
	8 years and above	5	13.9
	Total	36	100.0

Primary Data (Source: 2023)

This figure above (4.1.4) shows that 44.4% of the respondents had between 1 – 3 years, 41.7% of the respondents had between 4 – 7 years, 13.9% of respondents had 8 years and above experience.

#### 4.1.5 Occupation of the respondents

**Table 4.1. 5 Occupation of the respondents**

		<b>Frequency</b>	<b>Percent</b>
<b>Valid</b>	Employee	24	66.7
	Un - employment	7	19.4
	Self - employment	5	13.9
	Total	36	100.0

Primary Data (Source: 2023)

The table above shows the level of occupation of the respondents of the study. The occupation of 24 of the respondents was Employee and their percentage of the total respondents was 66.7%. The occupation of 7 of the respondents was Un – employment and their percentage was 19.4%, The occupation of 5 of the respondents was Self - employment and as a percentage to the total respondents was 13.9%.

## 4.2 Innovation and banking industry at dahabshil bank

### 4.2.1 Bank information has a positive effect on innovation.

**Table 4.2.1 At Dahabshil Bank, bank information has a positive effect on innovation**

		Frequency	Percent
<b>Valid</b>	Strongly disagree	4	11.1
	Disagree	9	25.0
	Neutral	6	16.7
	Agree	7	19.4
	Strongly agree	10	27.8
	Total	36	100.0

Primary Data (Source: 2023)

This table above (4.2.1) shows that the majority 10 (27.8%) and 9 (25%) of Dahabshil Bank workers strongly agreed and disagreed respectively, 7 (19.4%), 6 (16.7%) and 4 (11.1%) of them was agreed, neutral and strongly disagreed respectively, that At Dahabshil Bank, bank information has a positive effect on innovation.

### 4.2.2 Local banking development increases innovation

**Table 4.2.2 At Dahabshil Bank, local banking development increases innovation**

		Frequency	Percent
<b>Valid</b>	Strongly disagree	9	25.0
	Disagree	5	13.9
	Neutral	9	25.0
	Agree	4	11.1



Strongly agree	9	25.0
Total	36	100.0

Primary Data (Source: 2023)

This table above (4.2.2) shows that 9 (25%) and 9 (25%) of Dahabshil Bank workers strongly disagreed and neutral respectively, 9 (25%), 5 (13.9%) and 4 (11.1%) of them was Strongly agreed, disagreed and agreed respectively, that At Dahabshil Bank, local banking development increases innovation.

### **4.2.3 Banking distress during the Great Depression has negatively affected corporate innovation**

**Table 4.2. 3 At Dahabshil Bank, banking distress during the Great Depression has negatively affected corporate innovation**

		Frequency	Percent
<b>Valid</b>	Strongly disagree	9	25.0
	Disagree	5	13.9
	Neutral	4	11.1
	Agree	11	30.6
	Strongly agree	7	19.4
	Total	36	100.0

Primary Data (Source: 2023)

This table above (4.2.3) shows that the majority 11 (30.6%) and 9 (25%) of Dahabshil Bank workers agreed and strongly disagreed respectively, 7 (19.4%), 5 (13.9%) and 4 (11.1%) of them was strongly agreed, disagreed and neutral respectively, that At Dahabshil

Bank, banking distress during the Great Depression has negatively affected corporate innovation.

#### **4.2.4 Banks are more able to diversify risk geographically, which enhances their ability to lend to firms to engage in risky innovative projects**

**Table 4.2.4 At Dahabshil Bank, banks are more able to diversify risk geographically, which enhances their ability to lend to firms to engage in risky innovative projects**

		<b>Frequency</b>	<b>Percent</b>
<b>Valid</b>	Strongly disagree	13	36.1
	Disagree	4	11.1
	Neutral	6	16.7
	Agree	5	13.9
	Strongly agree	8	22.2
	Total	36	100.0

Primary Data (Source: 2023)

This table above (4.2.4) shows that the majority 13 (36.1%) and 8 (22.2%) of Dahabshil Bank workers strongly disagreed and strongly agreed respectively, 6 (16.7%), 5 (13.9%) and 4 (11.1%) of them was neutral, agreed and disagreed respectively, that At Dahabshil Bank, banks are more able to diversify risk geographically, which enhances their ability to lend to firms to engage in risky innovative projects.

### 4.3 Trust and banking industry at dahabshil bank

#### 4.3.1 Agreement with “Managers of financial institutions are in general sound.”

**Table 4.3.1 At Dahabshil Bank, agreement with “Managers of financial institutions are in general sound.”**

		Frequency	Percent
<b>Valid</b>	Strongly disagree	6	16.7
	Disagree	9	25.0
	Neutral	5	13.9
	Agree	7	19.4
	Strongly agree	9	25.0
	Total	36	100.0

Primary Data (Source: 2023)

This table above (4.3.1) shows that 9 (25%) and 9 (25%) of Dahabshil Bank workers disagreed and strongly agreed respectively, 7 (19.4%), 6 (16.7%) and 5 (13.9%) of them was agreed, strongly disagreed and neutral respectively, that At Dahabshil Bank, Agreement with “Managers of financial institutions are in general sound”.

#### 4.3.2 Trust mainly depends on customers’ assessment of bank performance characteristics and attributes

**Table 4.3.2 At Dahabshil Bank, trust mainly depends on customers’ assessment of bank performance characteristics and attributes**

		Frequency	Percent
<b>Valid</b>	Strongly disagree	8	22.2

Disagree	10	27.8
Neutral	6	16.7
Agree	2	5.6
Strongly agree	10	27.8
Total	36	100.0

Primary Data (Source: 2023)

This table above (4.3.2) shows that 10 (27.8%) and 10 (27.8%) of Dahabshil Bank workers disagreed and strongly agreed respectively, 8 (22.2%), 6 (16.7%) and 2 (5.6%) of them was strongly disagreed, neutral and agreed respectively, that At Dahabshil Bank, trust mainly depends on customers' assessment of bank performance characteristics and attributes.

#### **4.3.3 The dominance of a competitive banking culture is a reason why trust in banks remained low**

**Table 4.3.3 At Dahabshil Bank, the dominance of a competitive banking culture is a reason why trust in banks remained low**

		Frequency	Percent
<b>Valid</b>	Strongly disagree	8	22.2
	Disagree	11	30.6
	Neutral	4	11.1
	Agree	5	13.9
	Strongly agree	8	22.2
	Total	36	100.0

Primary Data (Source: 2023)

This table above (4.3.3) shows that the majority 11 (30.6%) and 8 (22.2%) of Dahabshil Bank workers disagreed and strongly disagreed respectively, 8 (22.2%), 5 (13.9%) and 4 (11.1%) of them was strongly disagreed, agreed and neutral respectively, that At Dahabshil Bank, the dominance of a competitive banking culture is a reason why trust in banks remained low.

#### **4.3.4 Good service recovery and relational selling behavior result in higher trust**

**Table 4.3.4 At Dahabshil Bank, good service recovery and relational selling behavior result in higher trust**

		Frequency	Percent
<b>Valid</b>	Strongly disagree	8	22.2
	Disagree	10	27.8
	Neutral	8	22.2
	Agree	3	8.3
	Strongly agree	7	19.4
	Total	36	100.0

Primary Data (Source: 2023)

This table above (4.3.4) shows that the majority 10 (27.8%) and 8 (22.2%) of Dahabshil Bank workers disagreed and strongly disagreed respectively, 8 (22.2%), 7 (19.4%) and 3 (8.3%) of them was neutral, strongly agreed and agreed respectively, that At Dahabshil Bank, good service recovery and relational selling behavior result in higher trust.

## 4.4 Security and banking industry at dahabshil bank

### 4.4.1 Security ratings are a great approach to indicate that you're concerned about the organization's cybersecurity

**Table 4.4. 1 At Dahabshil Bank, security ratings are a great approach to indicate that you're concerned about the organization's cybersecurity**

		Frequency	Percent
<b>Valid</b>	Strongly disagree	5	13.9
	Disagree	4	11.1
	Neutral	2	5.6
	Agree	23	63.9
	Strongly agree	2	5.6
	Total	36	100.0

Primary Data (Source: 2023)

This table above (4.4.1) shows that the majority 23 (63.9%) and 5 (13.9%) of Dahabshil Bank workers agreed and strongly disagreed respectively, 4 (11.1%), 2 (5.6%) and 2 (5.6%) of them was disagreed, neutral and strongly agreed respectively, that At Dahabshil Bank, security ratings are a great approach to indicate that you're concerned about the organization's cybersecurity.

#### **4.4.2 Inappropriate use of your private information might be very harmful**

**Table 4.4.2 At Dahabshil Bank, inappropriate use of your private information might be very harmful**

		Frequency	Percent
<b>Valid</b>	Strongly disagree	3	8.3
	Disagree	7	19.4
	Neutral	5	13.9
	Agree	6	16.7
	Strongly agree	15	41.7
	Total	36	100.0

Primary Data (Source: 2023)

This table above (4.4.2) shows that the majority 15 (41.7%) and 7 (19.4%) of Dahabshil Bank workers strongly agreed and disagreed respectively, 6 (16.7%), 5 (13.9%) and 3 (8.3%) of them was agreed, neutral and strongly disagreed respectively, that At Dahabshil Bank, inappropriate use of your private information might be very harmful.

#### **4.4.3 One of the most frequent problems with cybersecurity in the banking sector is phishing attacks**

**Table 4.4.3 At Dahabshil Bank, one of the most frequent problems with cybersecurity in the banking sector is phishing attacks**

		Frequency	Percent
<b>Valid</b>	Strongly disagree	7	19.4

Disagree	11	30.6
Neutral	10	27.8
Agree	6	16.7
Strongly agree	2	5.6
Total	36	100.0

Primary Data (Source: 2023)

This table above (4.4.3) shows that the majority 11 (30.6%) and 10 (27.8%) of Dahabshil Bank workers disagreed and neutral respectively, 7 (19.4%), 6 (16.7%) and 2 (5.6%) of them was strongly disagreed, agreed and strongly agreed respectively, that At Dahabshil Bank, one of the most frequent problems with cybersecurity in the banking sector is phishing attacks.

#### 4.4.4 Application security safeguards applications that are essential to business operations

**Table 4.4.4 At Dahabshil Bank, application security safeguards applications that are essential to business operations**

		Frequency	Percent
<b>Valid</b>	Strongly disagree	9	25.0
	Disagree	7	19.4
	Neutral	4	11.1
	Agree	11	30.6
	Strongly agree	5	13.9
	Total	36	100.0

Primary Data (Source: 2023)



This table above (4.4.4) shows that the majority 11 (30.6%) and 9 (25%) of Dahabshil Bank workers agreed and strongly disagreed respectively, 7 (19.4%), 5 (13.9%) and 4 (11.1%) of them was disagreed, strongly agreed and neutral respectively, that At Dahabshil Bank, application security safeguards applications that are essential to business operations.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.0 Introduction**

This chapter presents summaries of the study findings as per the objectives, conclusions based on those findings and recommendations which are based on both the study findings and the researcher's point of view considered necessary and vital to be used in future to improve the study situation and finally, recommendation for further research.

#### **5.1 Summary of Findings**

The study aimed to determine the impact of electronic payment system and banking industry from the data analysis in chapter four there exist a positive relationship between electronic payment system and banking industry.

The study used descriptive research design in explaining, analysing classifying data to obtain information concerning the current status of the phenomena, the major instrument used were questionnaire, this instrument helped the researchers to determine, describe and interrupt the problem, and analysing the relationship of the variables.

The respondents indicated their extent of agreement, neutral and disagreement by ticking one of the five points. The direction and degree of association between the independent variables, innovation, trust and security, the dependent variable banking industry had been measured by descriptive correlational design, the relative importance of the independent variables in predicting electronic payment system had been investigated by descriptive analysis.

The first section of the questionnaire was the background information of the respondents this section determines and participates their answers, for this purpose my research participates different kinds of the society.

The most important issue raised in the statement of the problem part was whether the of the electronic payment system of dahabshil bank is affected by the banking industry which directly and indirectly affect the overall banking performance of the institution and because for high institution.

Banking industry, electronic payment system elements considered in the study which are their innovation, trust, security, were discussed in the literature review part and they have huge role in any banking performance and can contribute for institution or company performance.

In respect of the demographic profile of respondents show the level of gender of the respondents of the questionnaire. The respondents were 36. The number of the male respondents was 21 and their percentage was 58.3%. The number of female respondents was 15 and their percentage was 41.7%.

The level of education of respondents into three parts. According to the table 4.1.3 indicates 20 (55.6%) of respondents gained bachelor degree, while 11 (30.6%) attained a master degree, while 5 (13.9%) of the Phd, so that most respondents contributed the study are the Bachelor degree.

According to the table 4.1.4 shows that 44.4% of the respondents had between 1 – 3 years of experience, 41.7% of the respondents had between 4 – 7 years, 13.9% of respondents have 8 years and above work experience.

## **5.2 Conclusion**

This study investigated the impact of electronic payment system on banking industry by observing Dahabshil International Bank, the target population of this study was employees at Dahabshil International Bank in Bosaso – Somalia. The researcher concluded according to finding of the 40 respondents that there is a positive impact of electronic payment system on banking industry, and it's the correlation between independent and dependent variable.

### **Objective One: - Effect of Innovation on Banking Industry**

Innovation is a way to overcome complex and changing situations, especially if firms use open innovation or customer-oriented innovation (Chesbrough, 2003, 2006). In fact, customers have an outside view on firms and have more realistic ideas, which are often more creative and more effective than inside ideas (Magnusson, 2003). In addition, attention on customers' ideas and needs creates faster ideas and launch much better innovative products/services. Therefore, paying attention to knowledge flows, which impact innovation speed and quality, is important for firms (Wang and Wang, 2012).

There is significant strong positive relationship between innovation and banking industry in selected Dahabshil Bank, Bosaso – Puntland, Somalia. Thus, the researcher implies and the  $r = 0.677$  and it shows that there is strong relationship between innovation and banking industry because the  $r$  is greater than 0.5.

### **Objective Two: - Effect of Trust on Banking Industry**

Customers' trust in the banking system can be a basis for continuous usage of banking service since trust is the reason why customers build long-term relationship with the bank (Ofori et al., 2017). The more the bank is able to win the trust of its customers, satisfaction

and loyalty is assured, and the uncertainty that may emerge from risk of customer switching is greatly reduced since the customer is reluctant or unlikely to disengage from this relationship. Adam et al. (2018) observed a positive relation between service quality and customer loyalty, trust and customer loyalty. This is in line with the findings of Hasan et al. (2014) that perceived value and trust tend to create customer loyalty with the mediating effects of customer satisfaction.

There is significant weak positive relationship between trust and banking industry in selected Dahabshil Bank, Bosaso – Puntland, Somalia. Thus, the researcher implies and the  $r = 0.491$  and it shows that there is a weak relationship between trust and banking industry because the  $r$  is less than 0.5.

### **Objective Three: - Effect of Security on Banking Industry**

Information systems security issues are now endemic to the banking industry across the globe (Chopra et al., 2013; Dwivedi et al., 2021a, 2021b). Commonly, no bank is safe and secure from cybercriminals and cyber-attacks. Lack of leadership involvement and employee behavior toward information systems security possess a high risk and fraud (Luftman et al., 2015). Employees' influences on intended information security behavior, and security plays a vital role in the effective implementation of IS security policies and compliance in organizations. However, employees are still considered the weakest link in defending against internal and external threats to organizational information assets (Bhattacharya, 2011; Crossler et al., 2013; Humaidi & Balakrishnan, 2015a; Kam et al., 2022 Maleem et al., 2020).

The current focus of security of information transfer is on the session layer protocols and the flaws in end-to-end computing. A secure end-to-end transaction requires a secure protocol to communicate over untrusted channels and a trusted code at both endpoints. The solution addresses the use of secure protocols because trusted channels don't really exist in most of the environment, especially since we are dealing with linking to the average consumers. The solutions to the security issues require the use of software-based systems or hardware-based systems or a hybrid of the two. These software-based solutions involve the use of encryption algorithms, private and public keys, and digital signatures to form software packets known as Secure Electronic Transaction used by Mastercard and Pretty Good Privacy. Hardware-based solutions such as the Smartcard and the MeChip provide better protection for the confidentiality of personal information. Software-based solutions have the advantage over hardware-based solutions in that they are easy to distribute and are generally less expensive.

There is significant moderate positive relationship between security and banking industry in selected Dahabshil Bank, Bosaso – Puntland, Somalia. Thus, the researcher implies and the  $r = 0.532$  and it shows that there is moderate relationship between security and banking industry because the  $r$  is equal than 0.5.

### **5.3 Recommendations**

As a researcher I would recommend the following points: -

- Different approaches to be used to generate accurate findings.
- It is also good to be extended the population of the study to improve the reliability
- More studies to be conducted on the topic to improve the knowledge of the banking industry.

- More studies to be conducted on the other departments on business.
- organizations to get all business people informed on the business as whole.
- Also, the electronic companies should improve the payment systems on their customers to generate more sales.
- The companies should also establish a strong relationship between their banking industry and electronic payment systems.

#### **5.4 Further Research Area**

The study focused on effects of electronic payment systems on banking industry. However, from our findings only trust had a significant effect on banking industry. Therefore, there is a need for similar study to be conducted in other organizations to determine other factors that effects banking industry. Due to limited research, the study also recommends that the research should be done to determine the effect of innovation on banking industry.

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## APPENDIX A: QUESTIONNAIRE

Dear Respondent

My name is Abdirahman Muhammed Abdalla one of the Students in Red Sea university, Faculty of Economic & Management Science, Department of Finance and Banking at bachelor degree. I am currently carrying out research on “**Impact of Electronic Payment System on Banking Industry in Dahabshil Bank, Bosaso – Somalia**”. The purpose of this questionnaire is to solicit your views on the above topic. I kindly, request you to fill in this questionnaire. All personal information collected will be strictly kept in confidentiality, and be solely used for ACADEMIC PURPOSES ONLY.

Please respond to all questions, as honestly as you can. Thank you so much in advance.

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### Section A: Demographic Information

Please indicate by making a cross (X) next to the option that best relates to you:

#### 1. Gender:

1	Male	
2	Female	

**2. Age:**

1	18 – 25 years old	
2	26 – 35 years old	
3	36 – 40 years old	
4	40 years old and above	

**3. Education Level**

1	Bachelor degree	
2	Master degree	
3	PHD	

**4. Work Experience**

1	No experience	
2	1 – 3 years	
3	4 – 7 years	
4	8 years and above	

**5. Occupation**

1	Employee	
2	Un – employment	
3	Self – employment	

### Section B: Effect of Innovation on Banking Industry

Answer the following statements as they apply to yourself (tick the appropriate value)

(1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree)

Innovation		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Bank information has a positive effect on innovation.					
2	Local banking development increases innovation					
3	Banking distress during the Great Depression has negatively affected corporate innovation					
4	Banks are more able to diversify risk geographically, which enhances their ability to lend to firms to engage in risky innovative projects					

### Section C: Effect of Trust on Banking Industry

Answer the following statements as they apply to yourself (tick the appropriate value)

(1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree)

Trust		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Agreement with “Managers of financial institutions are in general sound.”					
2	Trust mainly depends on customers’ assessment of bank performance characteristics and attributes					

3	The dominance of a competitive banking culture is a reason why trust in banks remained low					
4	Good service recovery and relational selling behavior result in higher trust					

#### **Section D: Effect of Security on Banking Industry**

Answer the following statements as they apply to yourself (tick the appropriate value)

(1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree)

Security		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Security ratings are a great approach to indicate that you're concerned about the organization's cybersecurity					
2	Inappropriate use of your private information might be very harmful					
3	One of the most frequent problems with cybersecurity in the banking sector is phishing attacks					
4	Application security safeguards applications that are essential to business operations					

**Thank you for your cooperation.**

**APPENDIX B:**  
**TIME FRAMEWORK PLAN**

No.	Task	Nov	Dec	Jan	Feb	March	Apr
1	Thesis topic selection						
2	Proposal writing						
3	Adjustment of proposal						
4	Data collection						
5	Data analysis and interpretation						
6	Typing and editing for thesis book						
7	Submission of thesis book						
8	Thesis book defense						

**APPENDIX C:**  
**BUDGET**

No.	Item	Description	Amount
1	Printing	Amount paid in printing service	\$10
2	Copying	Amount paid in copying service	\$5
3	Transportation Expenses	Amount paid in transportation expense	\$15
<b>Total</b>			<b>\$30</b>